Please replace the title on page 1 with the following:

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METHOD FOR DETECTING TARGET OBJECTS AND FOR DETERMINING THEIR DIRECTION AND THE LIKE FOR A RADAR DEVICE

On page 1, between lines 6 and 7, please insert the following heading:

TECHNICAL FIELD OF THE INVENTION

On page 1, between lines 10 and 11, please insert the following heading:

BACKGROUND OF THE INVENTION

Please replace the paragraph beginning on page 1, line 11, with the following rewritten paragraph:

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As disclosed, for example, in EP 0 727 051 B1, radar technology has become important for use in the motor vehicle industry to the extent that safety standards for a motor vehicle must be continuously adapted as the traffic density becomes ever greater. Radar devices have been designed to detect both stationary target objects and target objects moving relative to a motor vehicle, without making any contact with them. These devices can determine their range, speed, condition, presence, direction, etc. The radar devices used for this purpose are essentially based on two main traffic techniques relating to radar technology, which are known by the names "simultaneous lobing" and "sequential lobing".

Please replace the paragraph beginning on page 1, line 11, with the following rewritten paragraph:

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The term "simultaneous lobing" means a monopulse radar technique. The radar devices used to implement this technique and which use this technique include a transmitting and receiving device having typically 2 (one-dimensional) or 4 (two-dimensional) detection areas, which partially overlap and are evaluated simultaneously. The aim is to obtain an accurate

measurement of the position angle of the target object with respect to the radar device axis by means of intensity comparison. Angular resolution is not feasible, that is to say two or more objects at the same distance cannot as such be resolved separately from one another, since only a single object is detected rather than the at least two objects and, furthermore, this object is associated with an incorrect position angle.

On page 2, between lines 15 and 16, please insert the following paragraph:

The document US 5 598 163 discloses a multibeam radar system, which has a number of transmitting and receiving devices. The detection area of the radar system in this case comprises the beam fields of the receiving devices. The echo signals are in this case evaluated using the monopulse method.

On page 2, between lines 23 and 24, please insert the following headings and paragraphs:

SUMMARY OF THE INVENTION

In one embodiment of the invention, there is a method for detecting target objects using a radar device, including arranging at least three transmitting and receiving devices for radar beams such that their beam fields form a detection area of the radar device; activating and deactivating the at least three transmitting and receiving devices such that at least two adjacent transmitting and receiving devices are operated simultaneously; and evaluating the echo signals from the transmitting and receiving devices using the monopulse method.

In one aspect of the invention, one pair of adjacent transmitting and receiving devices are activated simultaneously.

In another aspect of the invention, at least one of the currently deactivated transmitting and receiving devices is reactivated for activation of the at least two transmitting and receiving devices.

In yet another aspect of the invention, the echo signals [redacted] the transmitting and receiving devices are evaluated individually on the basis of range, speed and intensity.

In still another aspect of the invention, the position angle of the target object relative to the radar device is determined by comparison of the intensities of the at least two transmitting and receiving devices.

BRIEF DESCRIPTION OF THE DRAWINGS

Details and features of the invention can be found in the following description, in which:

Figure 1 shows a perspective view of a passenger vehicle which has a radar device according to the invention.

Figure 2 shows a schematic illustration of the radar device with its individual beam fields.

Figure 3 shows a block diagram of a radar device.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Please replace the paragraph beginning on page 2, line 24, with the following rewritten paragraph:

In one embodiment of the invention, there is a method of the type which achieves particularly high position angle measurement accuracy by avoiding fluctuation errors in the measurement process, and nevertheless allows resolution between a number of objects at the same distance.

Please replace paragraph beginning on page 2, line 3 with the following rewritten paragraph:

This is achieved in one embodiment by arranging at least three transmitting and receiving devices for radar beams in a radar device in such a manner that their beam fields form the detection area of the radar device, and by successively activating and deactivating the at least three transmitting and receiving devices in such a manner that at least two adjacent transmitting and receiving devices are operated simultaneously. To this extent, the overall detection area of the radar device in the method according to the invention is subdivided into a number of area elements, in this case referred to as beam fields, which, in pairs or else in groups of a number of them, form a detection area element, which scans the entire detection area successively. The terms successive activation and deactivation in this case mean that the beam fields are not all active at the same time. The number of transmitting and receiving devices to be activated for one detection area element may also vary during a scanning process. Using a method such as this, the advantages of the two known methods "simultaneous lobing" and "sequential lobing" are combined in one method or in one device form in such a manner that the specific disadvantages of each of the known methods are also compensated for.

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Please replace the paragraph beginning on page 3, line 16, with the following rewritten paragraph:

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In another embodiment, a small detection area element which includes two transmitting and receiving devices is intended to be created, which effectively ensures accurate, step-by-step scanning of the entire detection area of the radar device.

Please replace the paragraph beginning on page 3, line 2[illegible] with the following rewritten paragraph:

In another embodiment of the invention, there is a sequence of a radar scan covering the entire detection area. This sequence comprises overlapping of successively activated detection area elements by at least one beam field of a transmitting and receiving device. For example, after deactivation of one pair of transmitting and receiving devices, a new pair is defined for activation in such a manner that, firstly, the transmitting and receiving device which is adjacent to the currently deactivated pair is activated. Secondly, that the currently deactivated transmitting and receiving device which is adjacent to the latter is reactivated.

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On page 3a, please delete lines 1-3.

On page 4, please delete lines 1-14.

Please replace the paragraph beginning on page 4, line 16, with the following rewritten paragraph:

Radar devices which operate using the method according to the invention are used in particular in motor vehicles in order, for example, to determine the range to other motor vehicles continuously. Figure 1 shows a passenger vehicle 1 which, centrally in its front area 2, has a radar device which is accommodated in the bodywork (not shown in Figure 1). This radar device has five transmitting and receiving devices, each of which emit radar beams in a known manner. Each of these beams from the transmitting and receiving devices is associated with a specific scanning area, which can be seen in Figure 1 in the form of a beam field a, b, c, d or e. Each of these beam fields a, b, c, d, e has a shape which extends conically from the radar device and

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overlaps the respectively adjacent beam field. To this extent, the illustration in Figure 1, with its touching beam fields, should be regarded only as a model illustration.

Please replace the paragraph beginning on page 5, line 6, with the following rewritten paragraph:

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Figure 2 illustrates the beam field arrangement of the radar device 3. The beam fields a, b, c, d, e are dimensioned to be of the same size and are arranged in such a manner that they overlap their respectively adjacent beam field. The extent of the overlap between the beam fields a, b, c, d, e is approximately half the width of one beam field. The detection area 4 is bounded by the two outer beam fields a and e and has a shape which extends in divergent manner from the radar device 3 in the detection plane.

Please replace the paragraph beginning on page 5a, line 1, with the following rewritten paragraph:

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It can be seen from this that the transmitting and receiving devices A, B, C, D and E are each activated in pairs, thus producing four different beam field pairs a/b, b/c, c/d, d/e. The transmitting and receiving devices are thus continuously switched on and off in pairs. This makes it possible to achieve particularly high position angle accuracy for a target object since, (a) a number of beam fields, in this case five, are used, and (b) activation of beam pairs avoids the angle measurement errors resulting from signal fluctuation.

On page 8, line 1, please replace "Patent Claims" with --WHAT IS CLAIMED IS--.